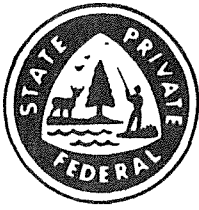
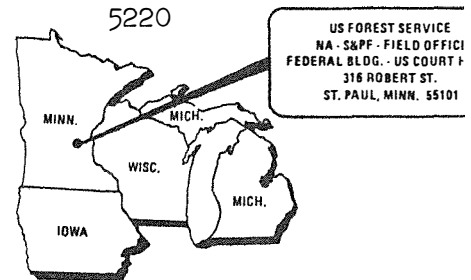


US DEPARTMENT OF AGRICULTURE  
FOREST SERVICE



*Northeastern Area*  
*State & Private Forestry*  
**DIVISION OF FOREST PEST CONTROL**



Rpt. No. S-71-12

October 1971

Oak Defoliation on the Manistee N.F.  
and adjacent forest lands in lower Michigan - 1971

By Glen Erickson

INTRODUCTION

Oak defoliation was first reported by the Baldwin and Manistee Ranger Districts in 1970 when approximately 250 sq. miles or 160,000 acres of oak type was severely defoliated in the lower Peninsula of Michigan (Map I). Defoliation has continued in 1971 and increased in intensity and gross area.

The last major outbreak of the red-humped oakworm occurred from 1956-58 when at the peak in 1957, about 45,000 acres was defoliated.

CAUSAL AGENTS

The primary species responsible for the oak defoliation is the Red-Humped oakworm, Symerista canicosta Franc. Other species associated with the defoliation are the Variable oak-leaf caterpillar, Heterocampa manteo (Dblly.) and the Post Oak Locust, Dendroteltix quercus Pack. These latter species occur in very low numbers compared to S. canicosta and only in small localized areas.

METHODS

The aerial survey was flown on October 5, 1971, by J. Benz, Cadillac Ranger District, and G. Erickson, FPM, St. Paul. The flights were in north-south directions: in parallel lines 6 miles apart; at 1000-2000 feet above the ground; at an airspeed of 110 m.p.h. Ground checks were made October 6-7, 1971, and during the pupal survey (October 18-21, 1971) to confirm the degrees and extent of the defoliated areas.

In addition to sketching the areas of heavy defoliation the total area of defoliation was delineated including areas with scattered individual and/or small groups of trees.



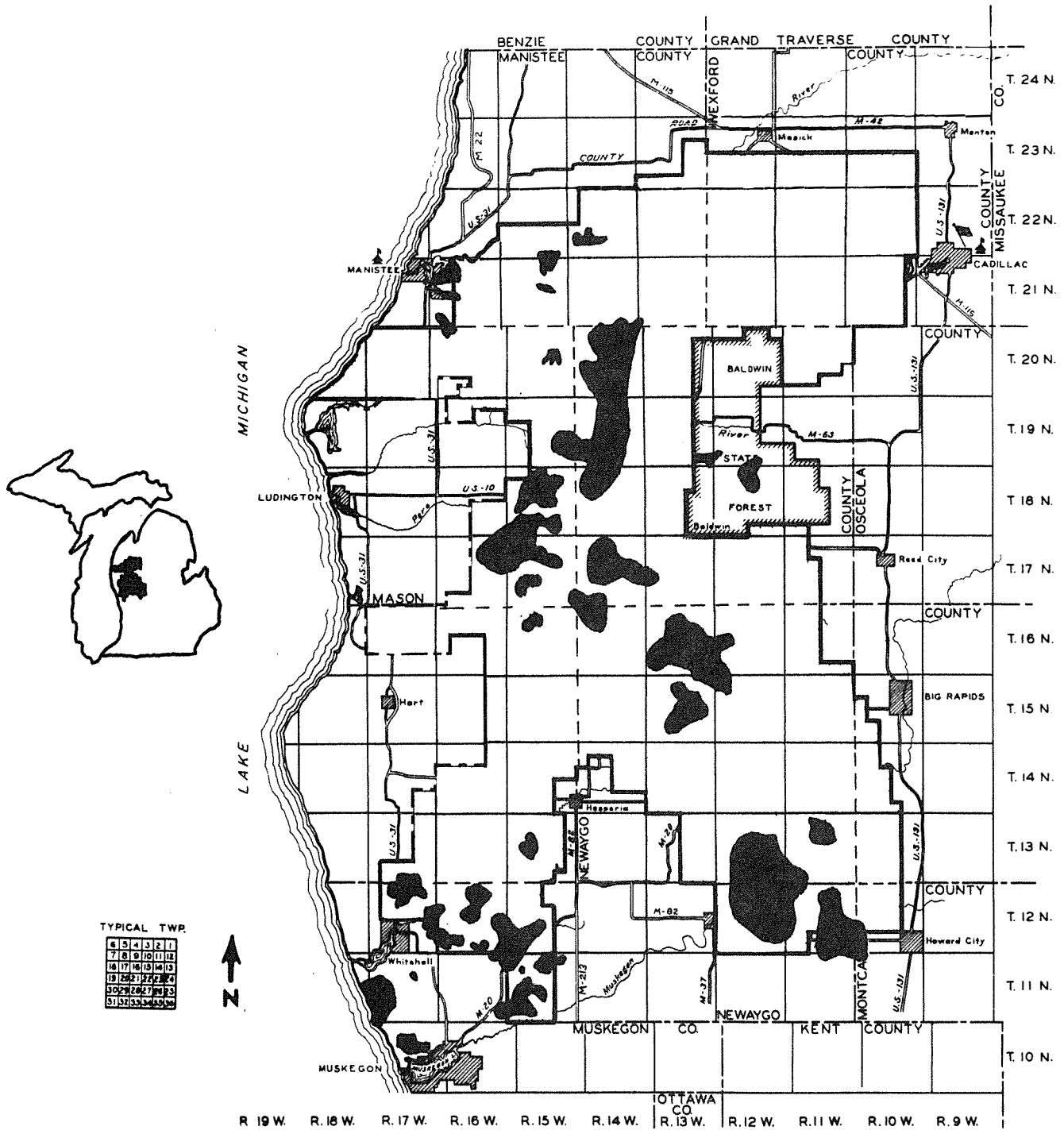
RESULTS AND DISCUSSION

Approximately 300,000 acres of oak type had severe defoliation (Map 2). In some areas this was the second year of complete stripping.

Moderate to heavy defoliation to individual or small groups of trees occurred over an additional gross area of 100,000 acres.

Further surveys will be conducted as long as the outbreak continues.

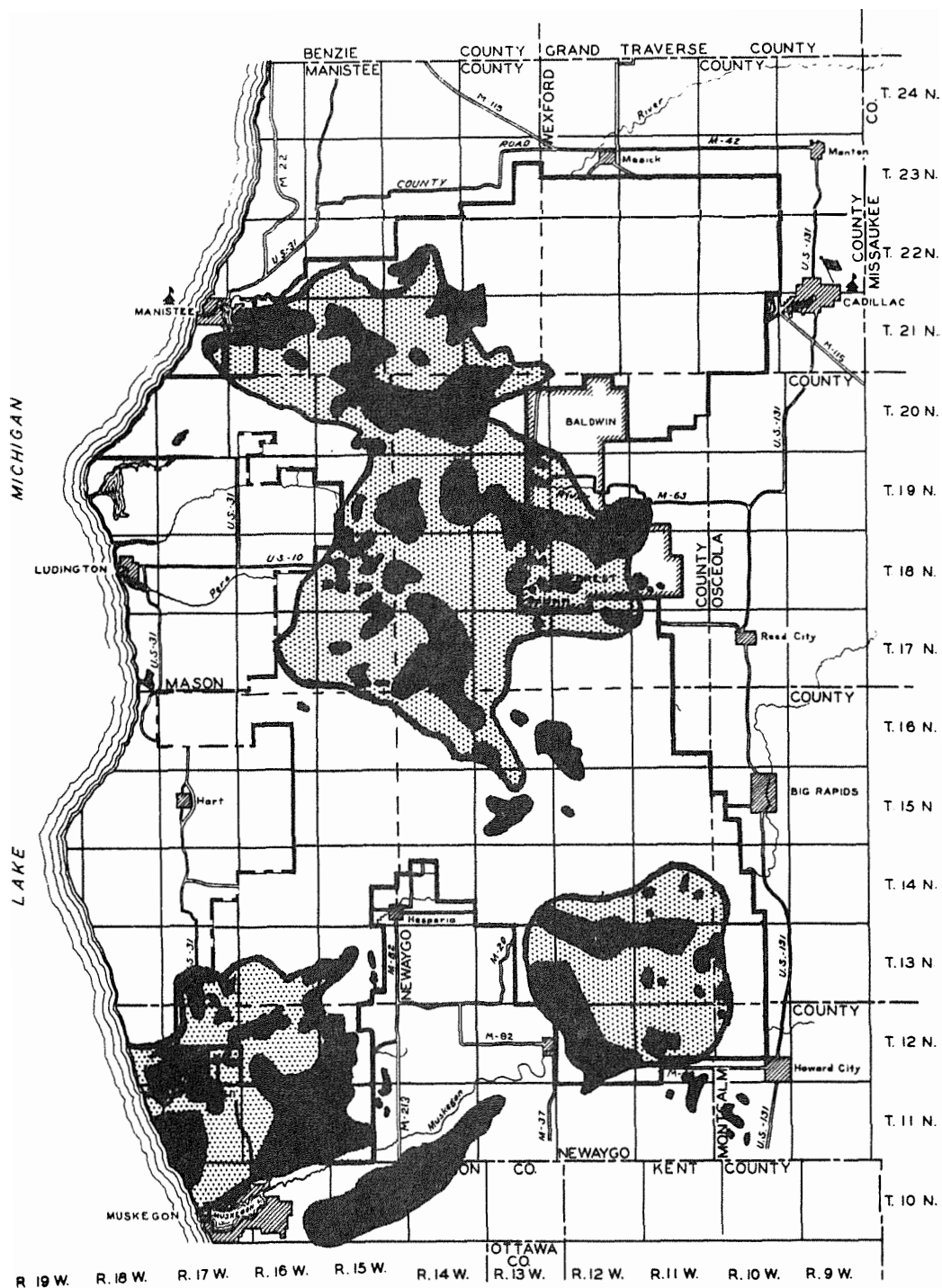
# MANISTEE NATIONAL FOREST



Map 1. Oak Defoliation - 1970

Severe

# MANISTEE NATIONAL FOREST



Map 2. Oak Defoliation - 1971

- Severe
- ▨ Moderate to Heavy  
(Scattered)